(54) Title: METHOD AND APPARATUS FOR HANDSET AUDIBLE ZONE AND NUMBER INDICATION

(57) Abstract: A telephone (5) is capable of being identified by one or more telephone numbers. Outgoing calls (steps 40 and 46) from the telephone may be priced according to pricing tiers based on geographic zones or time of day. The telephone may also operate in different modes, each of which has a different pricing tiers (step 44). The telephone generates dialtones (step 42) corresponding to the various pricing tiers (step 42).
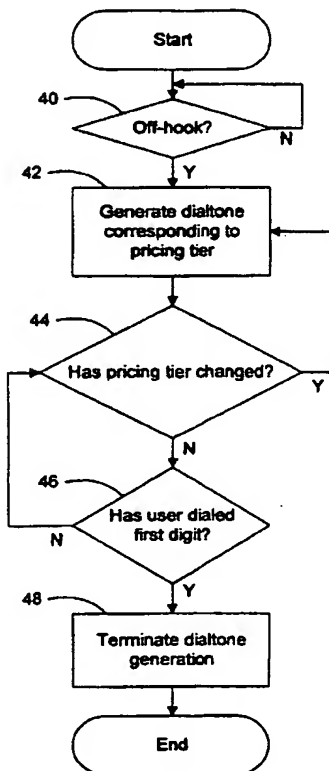
For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

METHOD AND APPARATUS FOR HANDSET
AUDIBLE ZONE AND NUMBER INDICATION

Technical Field

The present invention relates to dialtones in telephone handsets, and more
particularly to the generation of multiple dialtones in handsets, both in wireless and
landline telephones.

Background Art

Telephone users in today's wireless service environment have numerous
options and features available to them. As the number of available features grows, it
will become increasingly important to make users aware of the options that their
telephones use or subscribe to at any particular point in time. Most wireless
telephone handsets have LCD display screens which provide the user with some
information as to the current options or features in operation. The user, however,
often views the display several seconds before placing a call, so that the information
the user views may no longer be accurate when the user finally initiates the call.

One example of information that the user may want to know when placing a
call is the pricing that will be used for the call. A wireless telephone user may
subscribe to a calling plan which has several pricing tiers, possibly based on
geographic zones or time of day and/or day of week. The LCD display of the
subscriber's handset may inform the subscriber of the current pricing tier with a zone
or time indicator. Other handsets do not have the capability to display zone or
timing information. Even when the subscriber's handset displays zone or timing
information, the information may change between the time the user observes the
display and the time the user places a call. Thus, a user may not be aware of the
actual pricing tier used to charge for a particular call. Furthermore, some users do
not look at the displays of their handsets.

Another example of a handset that displays different pricing tiers is the GTE
Tele-Go® telephone, which operates in "home" mode in addition to wireless modes,
e.g., local and premium modes. When in the home mode, the telephone operates as

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a cordless phone, and calls are carried by the landline network. When in a wireless mode, calls are carried by the wireless network. The telephone's LCD screen displays the current operating mode. The actual operating mode, however, may change between the time the user observes the display screen and the time the user

5 places a call. Also, some users may not look at the display screen at all. Thus, a user may incur significant and unexpected airtime charges for a wireless call when the user thinks the telephone is operating in home mode.

A wireless telephone user may also want to know the number from which the user is about to place a call. A wireless telephone device is identified in part by its

10 Mobile Identification Number (MIN), a dialable number of the form NPA-NXX-XXXX (traditional North American Numbering Plan format). U.S. Patent No. 5,448,622 discloses a wireless telephone containing multiple MINs that are concurrently active, *i.e.*, the wireless device can originate or receive calls via any one of several MINs. To allow the user to determine which MIN is receiving an

15 incoming call, the wireless handset displays the MIN being called. Some wireless handsets may also provide distinctive ringing based on the MIN that is called. A user originating a call, however, receives no audible indication of which MIN is originating the call.

It is desirable, therefore, to provide a telephone user with audible information

20 to complement the telephone's visual display, thereby enhancing a telephone's capability of alerting the user to selected features and options. It is even more desirable to provide a method for audibly indicating the pricing tier or mode in which a wireless handset operates. It is also desirable to provide a scheme for audibly indicating the MIN or telephone number used for outgoing calls.

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Disclosure of Invention

The present invention satisfies those desires by providing a methodology for generating multiple dialtones in a telephone device. Different dialtones can indicate the pricing tier or mode of outgoing calls and/or the MIN from which the user places

30 an outgoing call.

A method consistent with the present invention determines the telephone number identifying the telephone for outgoing calls and generates a dialtone corresponding to that number. Another method consistent with the present invention determines the pricing tier that will apply to outgoing calls and generates a dialtone

5   corresponding to that pricing tier.

Apparatus are also provided for carrying out the methodologies of the present invention.

The advantages accruing to the present invention are numerous. Immediately before originating a call, a telephone user receives a current indication of the pricing

10   tier or mode under which charges for the call will be calculated. The user also receives an audible indication of the telephone number which will originate the call. An audible pricing tier and number indicator provides the user with accurate, timely information regarding the next originating call. The audible indicator also provides a visually impaired user with pricing and number information that otherwise would

15   not be available.

The above desires, and other desires, features, and advantages of the present invention will be readily appreciated by one of ordinary skill in the art from the following detailed description of the preferred implementations when taken in connection with the accompanying drawings.

20

Brief Description of Drawings

Figure 1 is a block diagram illustrating components of a telephone consistent with the present invention;

Figure 2 is a flow diagram of a method for generating dialtones consistent

25   with the present invention;

Figure 3 is a flow diagram of another method for generating dialtones consistent with the present invention; and

Figure 4 is a flow diagram of yet another method for generating dialtones consistent with the present invention.

30

Best Mode for Carrying Out the Invention

Detailed methodologies for implementing audible indication of pricing tier and telephone number information will now be presented.

Figure 1 shows a block diagram of components in a telephone 5 consistent
5   with the present invention. Controller 10 controls the operation of telephone 5.
Controller 10 may be implemented using one or more commercially available
microprocessors, known in the art, that can be programmed to receive and transmit
signals within telephone 5. Controller 10 receives input from keypad 14 and
delivers output to display 12, which visually shows information provided by
10   controller 10. Consistent with the present invention, controller 10 provides signals
to dialtone generator 20, which in turn provides a dialtone to earpiece speaker 22 of
telephone 5. Consistent with an embodiment of the present invention, dialtone
generator 20 generates a dialtone locally within telephone 5. Such a local dialtone
generator is described in U.S. Patent No. 5,535,260.

15   As illustrated in Figure 1, controller 10 also couples to memory 16. Memory
16 includes both volatile and non-volatile storage. Memory 16 stores data used in
connection with the operation of telephone 5. For example, memory 16 stores a
plurality of telephone numbers assigned to telephone 5. Memory 16 also stores
programming instructions which are executed by controller 10 in operating
20   telephone 5. Timer 18 also couples to controller 10 and helps controller 10 monitor
the passage of time. Although Figure 1 shows memory 16 and timer 18 as separate
components from controller 10, one skilled in the art will appreciate that memory
and timing components may be included within controller 10, and that timing
functions may also be performed through execution of software instructions in
25   controller 10.

In a method consistent with the present invention, a telephone generates a
different dialtone based on the telephone number selected. Consistent with the
present invention, memory 16 stores a plurality of telephone numbers assigned to
telephone 5. Telephone 5 also includes a facility that enables the user to select one
30   of the telephone numbers as an active telephone number to place calls. This facility

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may be included in keypad 14. Memory 16 also stores an indication of which one of

the plurality of telephone numbers has been selected as the active telephone number.

In addition, memory 16 stores a table correlating each of the plurality of telephone

numbers to a signal that may be passed to dialtone generator 20 to indicate which

5   dialtone to generate.

Figure 2 is a flow diagram illustrating a method consistent with the present

invention for generating a dialtone based on the active telephone number selected.

The process is performed by the telephone handset and may be implemented in

software, stored in memory, and executed by controller 10. The process begins by

10   detecting whether or not the telephone is in an off-hook condition (step 30), during

which a dialtone should be generated. A landline telephone ordinarily signals an off-

hook condition when the user lifts the handset or presses a button, such as a "phone"

button. A wireless telephone ordinarily signals an off-hook condition when the user

presses a button, such as a power button or a button labeled "phone," "send," "call,"

15   or "talk." If the telephone has not signaled an off-hook condition, the process

remains in a loop within step 30. If the telephone has signaled an off-hook

condition, processing continues to step 32.

Once the telephone detects an off-hook condition, the telephone generates a

dialtone that corresponds to the telephone number currently selected (step 32). To

20   perform this step, controller 10 of the telephone first reads memory 16 to determine

the currently selected telephone number. When the telephone first goes off-hook,

the currently selected telephone number may be the last telephone number selected

by the user when the telephone was last in use. Alternatively, the currently selected

telephone number may be automatically set to a default every time the telephone

25   goes off-hook. The telephone may also have multiple off-hook buttons, one

corresponding to each of the plurality of telephone numbers assigned to the

telephone, so that the user selects a number by pressing the corresponding off-hook

button. After obtaining the currently selected telephone number from memory 16,

controller 10 signals dialtone generator 20 indicating which dialtone to generate, also

obtained from memory 16. Finally, based on the signal received from controller 10, dialtone generator 20 outputs the appropriate dialtone to earpiece speaker 22.

Consistent with an embodiment of the present invention, dialtone generator 20 is a dual tone multifrequency (DTMF) tone generator, which is known in the art

5   and creates a tone by generating two simultaneous signals at different frequencies. Dialtone generator 20 is capable of generating a plurality of tones, each one corresponding to a different telephone number. The assignment of dialtones to telephone numbers may be fixed in the telephone or modifiable by the user. Once controller 10 determines the dialtone assigned to a particular telephone number, controller 10

10   signals dialtone generator 20 to output the dialtone to earpiece speaker 22.

With continuing reference to Figure 2, flow proceeds to step 34, in which the telephone determines whether the user has selected a different telephone number. Consistent with the present invention, the user may select a different telephone number from which the telephone will originate calls. If the user has selected a

15   different telephone number, control flow returns to step 32, and the telephone generates the dialtone corresponding to the newly selected telephone number. If the user has not selected a different telephone number, control flow proceeds to step 36 while the telephone continues to generate the previous dialtone.

In step 36, the telephone determines whether the user has dialed any digits

20   via keypad 14. If the user has dialed a digit, flow proceeds to step 38, and the telephone terminates the dialtone. Consistent with the present invention, controller 10 receives input from keypad 14 and signals dialtone generator 20 to terminate dialtone generation. If the user has not yet dialed a digit, flow returns to step 34 to once again determine if the user has selected a different telephone number.

25   Therefore, as long as the user does not select a new telephone number and does not begin dialing a number, the telephone continues to generate the dialtone corresponding to the selected telephone number.

In another method consistent with the present invention, a telephone generates a different dialtone based on the pricing tier that will apply to calls made

30   from the telephone. Consistent with the present invention, memory 16 stores pricing

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tier information. Depending on the structure of the pricing tiers, the telephone may generate pricing tier information internally or may receive pricing tier information from a telephone switching office. For example, if pricing is based solely on time of day, timer 18 of the telephone may communicate the time of day to controller 10.

5   On the other hand, if pricing is based on the geographic location of the telephone, the telephone may receive pricing information from the telephone switching office. In the case of a wireless telephone, the telephone may receive geographic pricing information when the telephone registers with the local office. Alternatively, a wireless telephone may receive zone information that is broadcast over the airwaves

10   on a control, paging, traffic, pilot, or other data bearing channel. In addition, memory 16 stores a table correlating each of the plurality of pricing tiers to a signal that may be passed to dialtone generator 20 to indicate which dialtone to generate.

        Figure 3 is a flow diagram illustrating a method consistent with the present invention for generating a dialtone based on the pricing tier. The process may be

15   implemented in software, stored in memory, and executed by controller 10. The process begins by detecting whether or not the telephone is in an off-hook condition (step 40), during which a dialtone should be generated. If the telephone has not signaled an off-hook condition, the process remains in a loop within step 40. If the telephone has signaled an off-hook condition, processing continues to step 42.

20   Once the telephone detects an off-hook condition, the telephone generates a dialtone that corresponds to the current pricing tier (step 42). To perform this step, controller 10 of the telephone first reads memory 16 to determine the current pricing tier. After obtaining the current pricing tier from memory 16, controller 10 signals dialtone generator 20 indicating which dialtone to generate, also obtained from

25   memory 16. Finally, based on the signal received from controller 10, dialtone generator 20 outputs the appropriate dialtone to earpiece speaker 22.

        The telephone then determines whether the pricing tier has changed, e.g., the time of day has changed or the telephone has moved to a location in a new pricing tier (step 44). If the pricing tier has changed, control flow returns to step 42, and the

30   telephone generates the dialtone corresponding to the new pricing tier. If the pricing

tier has not changed, control flow proceeds to step 46 while the telephone continues to generate the previous dialtone.

In step 46, the telephone determines whether the user has dialed any digits via keypad 14. If the user has dialed a digit, flow proceeds to step 48, and the

5   telephone terminates the dialtone. Consistent with the present invention, controller 10 receives input from keypad 14 and signals dialtone generator 20 to terminate dialtone generation. If the user has not yet dialed a digit, flow returns to step 44 to once again determine if the pricing tier has changed. Therefore, as long as the pricing tier has not changed and the user does not begin dialing a number, the

10   telephone continues to generate the dialtone corresponding to the current pricing tier.

Figure 4 is a flow diagram illustrating another method consistent with the present invention, in which the telephone generates a dialtone based on both the currently selected telephone number and the pricing tier that will apply to calls originated from the telephone. Similar to the methods illustrated in Figures 2 and 3,

15   the first step of the process in Figure 4 detects whether the telephone is in an off-hook condition (step 50), during which a dialtone should be generated. If the telephone has not signaled an off-hook condition, the process remains in a loop within step 50. If the telephone has signaled an off-hook condition, processing continues to step 52.

20   Once the telephone detects an off-hook condition, the telephone generates a dialtone that corresponds to both the currently selected telephone number and the current pricing tier (step 52). To perform this step, controller 10 of the telephone first reads memory 16 to determine the current telephone number and current pricing tier. After obtaining the current telephone number and current pricing tier from

25   memory 16, controller 10 signals dialtone generator 20 indicating which dialtone to generate. Finally, based on the signal received from controller 10, dialtone generator 20 outputs the appropriate dialtone to earpiece speaker 22.

Consistent with an embodiment of the present invention, dialtone generator 20 is capable of generating a plurality of tones, each one corresponding to a different

30   telephone number. Dialtone generator 20 is also capable of overlaying an indicator

of the pricing tier on the tone generated for a telephone number. One such indicator is a stuttering of the tone at different rates, where the rate of stuttering indicates the pricing tier. Another indicator is short beeps at a different frequency from the underlying dialtone corresponding to the telephone number. The assignment of

5   dialtones to telephone numbers and pricing tiers may be fixed in the telephone or modifiable by the user.

The telephone then determines whether the pricing tier has changed (step 54). If the pricing tier has changed, control flow returns to step 52, and the telephone generates the dialtone corresponding to the selected telephone number and the new

10 pricing tier. If the pricing tier has not changed, control flow proceeds to step 56 while the telephone continues to generate the previous dialtone. In step 56, the telephone queries whether the user has selected a different telephone number. If the user has selected a different telephone number, control flow returns to step 52, and the telephone generates the dialtone corresponding to the newly selected telephone

15 number and the current pricing tier. If the user has not selected a different telephone number, control flow proceeds to step 58 while the telephone continues to generate the previous dialtone.

In step 58, the telephone determines whether the user has dialed any digits via keypad 14. If the user has dialed a digit, flow proceeds to step 60, and the

20 telephone terminates the dialtone. Consistent with the present invention, controller 10 receives input from keypad 14 and signals dialtone generator 20 to terminate dialtone generation. If the user has not yet dialed a digit, flow returns to step 54 to once again determine if the pricing tier has changed. Therefore, as long as the pricing tier does not change and the user does not select a new telephone number or

25 begin dialing a number, the telephone continues to generate the dialtone corresponding to the selected telephone number and the current pricing tier.

It will be apparent to those skilled in this art that various modifications and variations can be made to the multiple dialtone generating scheme of the present invention without departing from the spirit and scope of the invention. For example,

30 a method consistent with the present invention can be used in either a wireless or a

landline telephone device to differentiate pricing tier information or telephone numbers. Also, in a method consistent with the present invention, the different dialtones can be generated locally within the telephone or by the switch serving the telephone. Other embodiments of the invention will be apparent to those skilled in

5   this art from consideration of the specification and practice of the invention disclosed herein. It is intended that the specification and examples be considered exemplary only, with the true scope and spirit of the invention being indicated by the following claims.

Claims:

1.	A method for indicating an attribute of a telephone, the method comprising the steps of:

determining the attribute of the telephone; and

5	generating a distinct dialtone corresponding to the attribute and different from dialtones corresponding to other attributes.

2.	A telephone comprising:

a controller capable of determining an attribute of the telephone; and

10	a dialtone generator, coupled to the controller, capable of generating a distinct dialtone corresponding to the attribute and different from dialtones corresponding to other attributes.

3.	A method for indicating a number identifying a telephone, the

15	telephone capable of being identified by any of a plurality of numbers, the method comprising the steps of:

determining one of the numbers identifying the telephone; and

generating a dialtone corresponding to the number identifying the telephone.

20	4.	The method of claim 3 further comprising the steps of

detecting the entry of a dialed digit; and

terminating the dialtone in response to the dialed digit.

5.	The method of claim 3 wherein the telephone includes a memory for

25	storing the plurality of numbers, and wherein the determining step includes the substep of accessing the memory.

6.	The method of claim 3 further comprising the step of repeating the determining step and generating step in response to a change in the number

30	identifying the telephone.

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7.   A telephone, capable of being identified by any of a plurality of
numbers, comprising:

a controller capable of determining a number identifying the telephone; and

a dialtone generator, coupled to the controller, capable of generating a

5   dialtone corresponding to the number.

8.   The telephone of claim 7 further comprising

means for detecting the entry of a dialed digit; and

means for terminating the dialtone in response to the dialed digit.

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9.   The telephone of claim 7 further comprising a memory for storing the
plurality of numbers, wherein the controller includes means for accessing the
memory.

15   10.   The telephone of claim 7 further comprising means for determining a
change in the number identifying the telephone.

11.   A method for indicating a pricing tier applying to outgoing calls from
a telephone, the method comprising the steps of:

20   determining the pricing tier; and

generating a dialtone corresponding to the pricing tier.

12.   The method of claim 11 further comprising the steps of

detecting the entry of a dialed digit; and

25   terminating the dialtone in response to the dialed digit.

13.   The method of claim 11 wherein the determining step includes the
substeps of

determining a current time of day; and

30   determining the pricing tier associated with the time of day.

14. The method of claim 11 wherein the telephone includes a memory for storing the pricing tier, and wherein the determining step includes the substep of accessing the memory.

5 15. The method of claim 11 further comprising the step of repeating the determining and generating steps in response to a change in the pricing tier.

16. A telephone for making outgoing calls comprising:

a controller capable of determining a pricing tier applying to the outgoing

10 calls; and

a dialtone generator, coupled to the controller, capable of generating a dialtone corresponding to the pricing tier.

17. The telephone of claim 16 further comprising

15 means for detecting the entry of a dialed digit; and

means for terminating the dialtone in response to the dialed digit.

18. The telephone of claim 16 further comprising a timer for measuring a current time of day, wherein the controller includes means for determining the

20 pricing tier in response to the time of day.

19. The telephone of claim 16 further comprising a memory for storing the pricing tier, wherein the controller includes means for accessing the memory.

25 20. The telephone of claim 16 further comprising means for determining a change in the number identifying the telephone.

21. A method for indicating a number identifying a telephone and a pricing tier applying to outgoing calls from the telephone, the telephone capable of

being identified by any of a plurality of numbers, the method comprising the steps of:

determining the number identifying the telephone;

determining the pricing tier; and

5   generating a dialtone corresponding to the number and the pricing tier.

22.   A telephone for making outgoing calls, the telephone capable of being identified by any of a plurality of numbers, comprising:

means for determining a number identifying the telephone;

means for determining a pricing tier applying to the outgoing calls; and

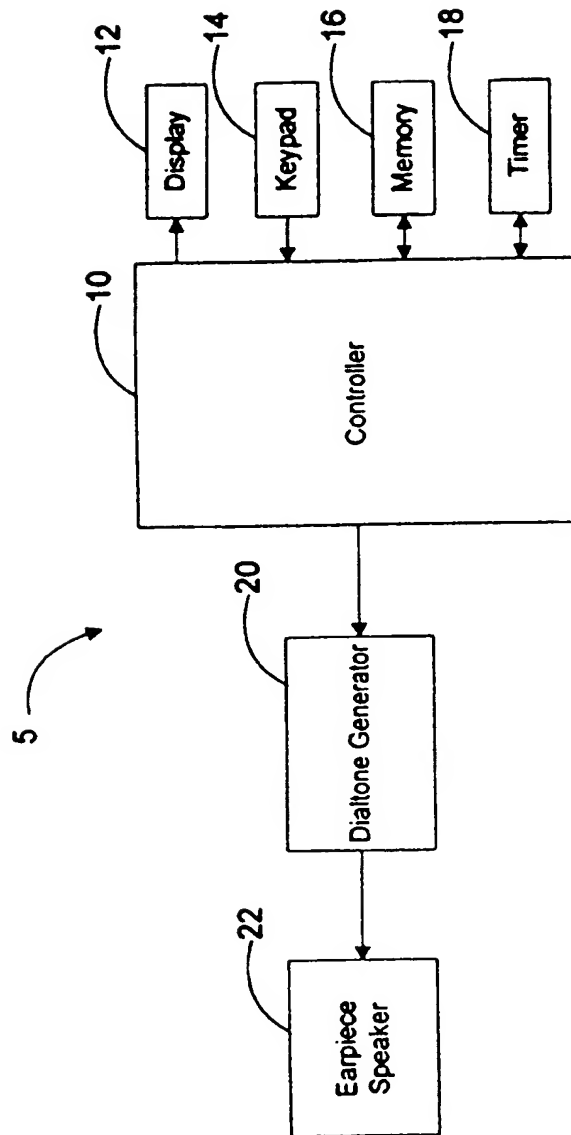10   a dialtone generator for generating a dialtone corresponding to the number and the pricing tier.
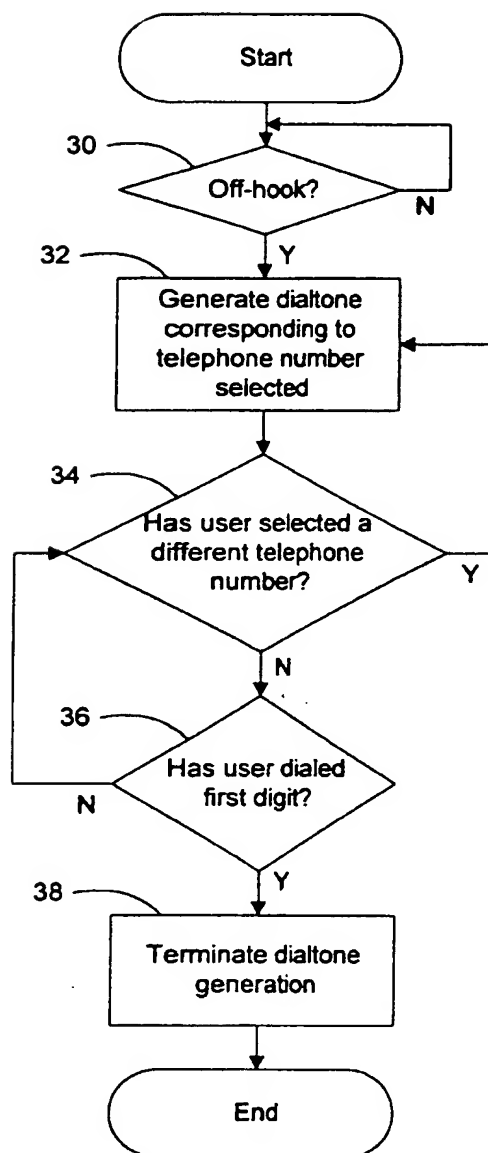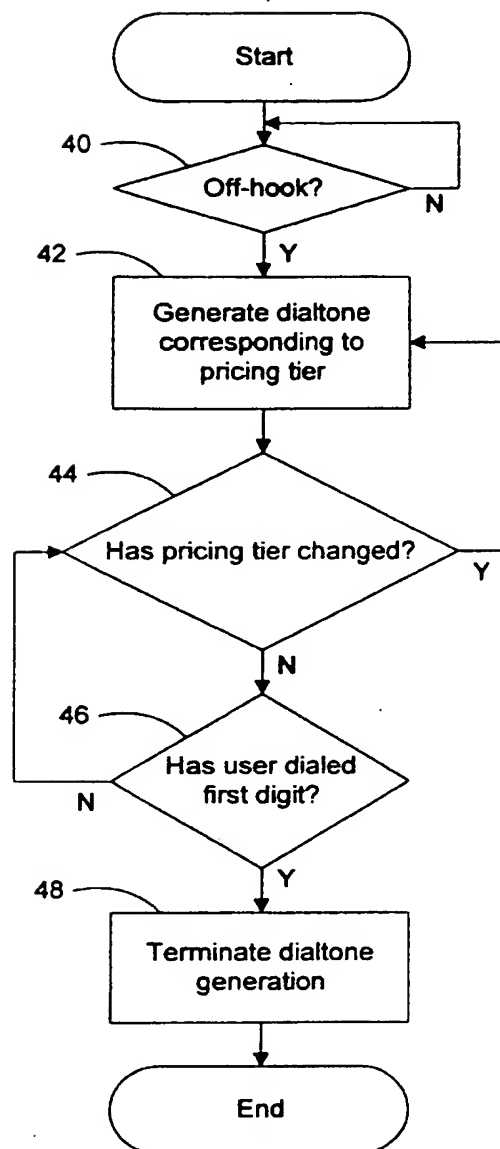
FIG. 1

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                        ┌─────────────────┐
                        │      Start       │
                        └─────────────────┘
                                 │
                                 ▼
          30 ─────────────╱──────────────╲ ◄───────┐
                          ╲   Off-hook?   ╱───► N ──┘
                           ╲─────────────╱
                                 │ Y
                                 ▼
          32 ──────────┌─────────────────────┐
                       │  Generate dialtone    │ ◄───────┐
                       │  corresponding to     │         │
                       │  telephone number     │         │
                       │  selected             │         │
                       └─────────────────────┘         │
                                 │                        │
                                 ▼                        │
          34 ───────────╱──────────────────╲              │
                  ┌──── ╱ Has user selected a ╲            │
                  │     ╲ different telephone  ╱──► Y ─────┘
                  │      ╲    number?         ╱
                  │       ╲─────────────────╱
                  │              │ N
                  │              ▼
          36 ─────│──────╱───────────────╲
                  │      ╲  Has user dialed ╱
                  └─ N ──╲  first digit?    ╱
                          ╲───────────────╱
                                 │ Y
                                 ▼
          38 ──────────┌─────────────────────┐
                       │  Terminate dialtone   │
                       │  generation           │
                       └─────────────────────┘
                                 │
                                 ▼
                        ┌─────────────────┐
                        │       End        │
                        └─────────────────┘
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FIG. 2

FIG. 3

FIG. 4

INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER
IPC(6)   :HO4M 1/56, 15/00, 15/06
US CL   :379/111-119, 120-121, 127, 133-134, 142
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED
Minimum documentation searched (classification system followed by classification symbols)

U.S. : 379/111-119, 120-121, 127, 133-134, 142

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

NONE

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EAST, WEST, STN
search terms: pricing tiers, dial tones, dialtones, caller id, clid, cnid, cpid

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,912,963 A (BEGEJA et al) 15 June 1999, col. 5, lines 1-8, col. 6, lines 35-49.	11,14-16, 19-20
X	US 5,799,072 A (VULCAN et al) 25 August 1998, col. 17, lines 6-37.	12-18
X	US 5,590,185 A (SANDLER et al) 31 December 1996, col. 1, line 40 to col. 2, line 61.	21-22

☐ Further documents are listed in the continuation of Box C.   ☐ See patent family annex.

•	Special categories of cited documents:	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A"	document defining the general state of the art which is not considered to be of particular relevance	
"E"	earlier document published on or after the international filing date	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O"	document referring to an oral disclosure, use, exhibition or other means	
"P"	document published prior to the international filing date but later than the priority date claimed	"&"	document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
22 MARCH 2000	2 1 APR 2000

Name and mailing address of the ISA/US	Authorized officer
Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703) 305-3230	DUC NGUYEN *James R. Matthews* Telephone No. (703) 308-7527

INTERNATIONAL SEARCH REPORT

International Application No.

PCT/US99/28342

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This international report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
   because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
   because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
   because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
   11-22

Remark on Protest ☐ The additional search fees were accompanied by the applicant's protest.

☐ No protest accompanied the payment of additional search fees.

Form PCT/ISA/210 (continuation of first sheet(1))(July 1992)★